

## PRE-APPEAL BRIEF REQUEST FOR REVIEW

Docket Number (Optional)  
890050.442

	Application Number 10/691,851	Filed October 23, 2003
	First Named Inventor Syuji Tsukamoto	
Art Unit 1725	Examiner Maria Alexandra Elve	

Applicant requests review of the final rejection in the above-identified application. No amendments are being filed with this request.

This request is being filed with a notice of appeal.

The review is requested for the reason(s) stated on the attached sheet(s).

Note: No more than five (5) pages may be provided.

I am the

applicant/inventor.  
 assignee of record of the entire interest.  
See 37 CFR 3.71. Statement under 37 CFR 3.73(b) is enclosed.  
(Form PTO/SB/06.)  
 attorney or agent of record.  
Registration No. 45,886  
 attorney or agent acting under 37 CFR 1.34.  
Registration number if acting under 37 CFR 1.34 \_\_\_\_\_.



Signature

Raymond W. Armentrout

Typed or Printed Name

(206) 622-4900

Telephone Number

May 24, 2007

Date

NOTE: Signatures of all the inventors or assignees of record of the entire interest or their representative(s) are required.  
Submit multiple forms if more than one signature is required, see below\*.

\*Total of 1 forms are submitted.

SEND TO: Mail Stop AF, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.  
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STATEMENT IN SUPPORT OF PRE-APPEAL BRIEF REQUEST FOR REVIEW

1. Statement of Clear Error in Rejection

The Office Actions and Advisory Actions reject claims 1-3, 7, and 10-14 under 35 U.S.C. § 103(a) as allegedly unpatentable over *Ahn et al.* (U.S. Patent 6,346,367), hereinafter *Ahn*, in view of *Mizuno* (U.S. Patent 6,421,307), hereinafter *Mizuno*.

The rejection is in error for at least the reasons *Ahn* in view of *Mizuno* does not disclose a method for cutting a photoresist-coated glass board comprising intermittently projecting a first laser beam for forming a groove onto the photoresist-coated glass board and intermittently projecting a second laser beam for forming land pre-pits *in synchronism with blocking the first laser beam* as recited in claim 1. Further, the proposed combination fails to disclose a method for manufacturing an optical recording medium comprising intermittently projecting a first laser beam for forming a groove onto the photoresist-coated glass board and intermittently projecting a second laser beam for forming land pre-pits in synchronism with blocking the first laser beam as recited in claim 11. Further, the proposed combination fails to disclose a method for cutting a photoresist-coated glass board comprising intermittently projecting a first laser beam for forming a groove onto the photoresist-coated glass board and intermittently projecting a second laser beam for forming land pre-pits in synchronism with blocking the first laser beam onto the photoresist-coated glass board as recited in claim 12.

More particularly, the proposed combination of *Ahn* in view of *Mizuno* does not disclose the following features:

1. Projecting the second laser beam while blocking the first laser beam,
2. Projecting the second laser beam for forming land pre-pits, and
3. If *Ahn* is modified as proposed using *Mizuno*, *Ahn* no longer performs as intended. That is, the principle of operation of *Ahn* is changed to such an extent that *Ahn* no longer operates as disclosed.
  - a. Projecting the second laser beam while blocking the first laser beam

*Ahn* discloses a system where two laser beams LB1 and LB2 are concurrently projected onto the optical recording medium (column 3, lines 20-30) such that the projection 122

is formed in an information pit. *Ahn* Figure 5B illustrates *the projection 122* resulting from the concurrently projected laser beams LB1 and LB2. In *order to form the projection 122*, both *Ahn beams LB1 and LB2 must be concurrently projected* onto the optical recording medium. There is no other way under *Ahn* to form the disclosed projection 122.

*Mizuno* discloses a system for *analyzing return light* from an optical recording medium with data marks stored onto the groove of the optical recording medium. That is, the optical recording medium of *Mizuno* has already had data recorded in the groove. *Mizuno* is merely *reading the recorded data* by analysis of the return light LR. Accordingly, even if *Ahn* is modified by *Mizuno*, the *Ahn* beams LB1 and LB2 are still *concurrently projected* onto the recording medium since *Mizuno* does not disclose any aspect of blocking *projected* beams.

More particularly, *Mizuno* discloses an “*optical device for use in receiving and detecting a returned light reflected from an irradiated portion*” by irradiating a light from a light-emitting portion, for example, on the irradiated portion of an optical recording medium such as an optical disk, a phase-change type optical disk and so on” (column 1, lines 6-10, and Figures 1 and 2B). *Mizuno* Figure 1 shows “an example of a conventional optical pickup 81 that is exclusively used for reproducing a compact disc (CD). This optical pickup 81 comprises a semiconductor laser 82, a diffraction grating 83, a beam splitter plate 84, an objective lens 85 and a light-receiving element 86 composed of a photo-diode. A laser light L from the semiconductor laser 82 is reflected on the beam splitter plate 84, converged by the objective lens 85 and thereby irradiated on an optical disk 90. A *returned light reflected on the optical disk 90* is traveled through the objective lens 85 and the beam splitter plate 84 and received and detected by the light-receiving element 86” (column 1, lines 25-36, emphasis added). *Mizuno* further discloses a “confocal knife edge arrangement (hereinafter referred to as CKE arrangement), as shown in FIGS. 11A and 11B, although the *returned light L<sub>R</sub> is split in the right and left directions* by the knife edge KE formed of a pyramid mask located at the confocal position, it is clear from FIGS. 12 and 13 that the changes of the patterns relative to the detacks on the respective separated sides (hereinafter referred to as channels) approximately conform to the changes of the patterns of the prior-art type (structure without knife edge based on the semiconductor structure of triangular pyramid shape; the landing position of each diffracted light is seen in FIG. 20) shown in FIG. 21” (column 10, lines 19-30, emphasis added). Accordingly,

at most, the *returned* light is split in the *Mizuno* optical disk reader system. Nowhere does *Mizuno* disclose any type of first and second laser beams which are *intermittently projected in synchronism with each other* such that the first laser beam is *blocked* when the second laser beam is projected to form the land pre-pit.

Therefore, when considering both references in combination, even if the *Ahn* system *is modified* by the *Mizuno* optical disk reading system, at most, a return beam of light reflected from the optical recording medium would be split and then analyzed by the modified *Ahn* system. That is, even after the *Ahn* system *is modified* by the *Mizuno* system, both *Ahn* laser beams LB1 and LB2 would still be concurrently projected.

b. Projecting the second laser beam to form land pre-pits

*Ahn* discloses at most that the two laser beams LB1 and LB2 are projected to form “information pits 12 recessed from a reference surface 11 by a predetermined depth, and a projection 122 is formed in a respective information pit 12. The projection 122 projects with respect to a bottom surface 121 of the information pit 12. The projection 122 rises to a height which is lower than the reference surface 11, and divides the information pit 12 into two u-shaped cross-sections” (column 2, lines 51-58, emphasis added). This is quite different from forming the groove (using the first laser beam) and *forming the land pre-pit* (using the second laser beam while blocking the first laser beam).

As noted above, *Mizuno* discloses a system for *analyzing return light* from an optical recording medium with data marks stored onto the groove of the optical recording medium. That is, the optical recording medium of *Mizuno* has already had data recorded in the groove. *Mizuno* is merely *reading the recorded data* by analysis of the return light LR. There is simply no disclosure whatsoever regarding the formation of land pre-pits in *Mizuno*.

Considering both references in combination, even if the *Ahn* system *is modified* by the *Mizuno* optical disk reading system, at most, the modified *Ahn* system would still be limited to recording data marks (information pits). That is, there is nothing in *Mizuno* that can be used to modify *Ahn* to disclose forming land pre-pits on the optical type recording media.

c. Principle of operation is changed such that Ahn no longer operates as disclosed

If, arguendo, the *Ahn* system *is modified* by *Mizuno* as proposed in the Office Action to block one of the projected beams LB1 and LB2, then the blocking of one of the beams would result in formation of a data mark (information pit) *that does not have the requisite projection 122*. According to the disclosure of *Ahn*, a data mark (information pit) with the projection 122 is an essential feature of *Ahn*. *Ahn* expressly teaches that “an optical disk 10 according to an embodiment of the present invention includes information pits 12 recessed from a reference surface 11 by a predetermined depth, and a *projection 122* is formed in a respective information pit 12. The projection 122 projects with respect to a bottom surface 121 of the information pit 12. The projection 122 rises to a height which is lower than the reference surface 11, and *divides the information pit 12 into two u-shaped cross-sections*” (column 2, lines 49-59). That is, *Ahn* (before modification by *Mizuno*) is forming the projection 122 which divides the information pit into two u-shaped cross-sections. If modified as proposed by the Office Action to intermittently form a groove with the first laser beam and land pre-pits with the second laser beam (while the first beam is blocked), then no projection 122 is formed. Accordingly, the principle of operation of *Ahn* is changed since *Ahn* no longer forms the requisite projection 122.

In the absence of the projection 122, the data mark (information pit) formed by the modified *Ahn* apparatus would not work as intended. Accordingly, it is not permissible to modify *Ahn* using *Mizuno* in the above-described manner pursuant to MPEP § 2143.02, entitled “THE PROPOSED MODIFICATIONS CANNOT CHANGE THE PRINCIPLE OF OPERATION OF A REFERENCE,” which states that “if the proposed modification or combination of the prior art would change the principle of operation of the prior art invention being modified, then the teachings of the references are not sufficient to render the claims *prima facie* obvious.” Because the principle of operation of *Ahn* after modification by *Mizuno* is changed (the projection 122 is absent as a direct result of blocking one of the two projected beams LB1 and LB2), a *prima facie* case of obviousness cannot be established under the above-described modified *Ahn* apparatus.

2. Response to Statements of the Office Action

The Office Action at page 3, Response to Arguments, states that the “rejection is made over two references. In response to applicant’s arguments against the references

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individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references.” Applicants respectfully traverse the allegation that the references are separately argued and not argued in combination. The pre-appeal brief conference panel is respectfully referred to the Applicants’ response to the final Office Action, incorporated herein by reference, where each and every argument for allowability was addressed from the perspective of the *Ahn* system modified by *Mizuno*.

Applicants respectfully submit that the Office Action’s interpretation of the Applicants’ arguments may itself be a potential flaw in the Office Action which is sufficient to constitute a basis for reversal by the Appeals Board. Applicants raise this issue with the pre-appeal brief conference panel, in part, to preserve the Applicants’ right to appeal the final rejections on this basis alone.

**3. Conclusion**

Applicants wish to thank the pre-appeal brief conference panel for their time and for consideration of the issues raised herein. The pre-appeal brief conference program is believed to be a very efficient and effective tool for advancing prosecution of an Application, and Applicants strongly support the continued use of this program.

Applicants respectfully submit that all objections and/or rejections have been traversed, rendered moot, and/or accommodated, and that all pending claims 1-3, 7, 10-14 are allowable.

Respectfully submitted,

SEED Intellectual Property Law Group PLLC



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Raymond W. Armentrout  
Registration No. 45,866

RWA:cl  
701 Fifth Avenue, Suite 5400  
Seattle, Washington 98104-7092  
Phone: (206) 622-4900  
Fax: (206) 682-6031  
890050.442 / 9593388